

(57) Abstract

The present invention provides a new gasoline fuel composition, having in combination an octane value $(R+M)/2$ of at least 85; an aromatics content less than 25 vol. %; and a water-soluble ethers content of less than 1 vol. %.

The composition has a content of olefins, at least 10 % of which is formed by heavy olefins having a boiling point above $+90^{\circ}\text{C}$. In particular, the composition contains up to 40 % olefins, and it contains less than 6 vol.-% of light olefins having a boiling point below $+90^{\circ}\text{C}$, and at least 1 vol.-% heavy branched olefins having a boiling point above $+90^{\circ}\text{C}$. Reductions in emissions of pollutants can be obtained by introducing into an automotive engine an unleaded gasoline having a composition according to invention, combusting the unleaded gasoline in said engine; introducing at least some of the resultant engine exhaust emissions into the catalytic converter; and discharging emissions from the catalytic converter to the atmosphere.